Discussion of Paolo Acciari, Alberto Polo and Gianluca Violante’s

«And Yet it Moves»: Intergenerational Mobility in Italy

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This paper

- Innovates the literature of intergenerational (IG) income analyses in Italy
- Provides **direct** estimates of IG correlations of income
- Uses the population of tax records linking parents and children
- As of 1998, information from digitalized tax declarations is available
- Allows the IG link for children permanently residing with the parents and claimed on the tax declaration
- Considers parents' incomes 1998-99 and children in 2011-12
- Estimates wide set of mobility measures, both at the national level and by province of birth

A data-poor country (traditionally)

- Until today Italy lacks **direct** estimates of IG income mobility
- Lack of data enabling the linkage of parent-child **permanent** incomes
- Other countries have relied on admin data (Scandinavia) or longitudinal household surveys (UK, GER, US)

A data-poor country

- Lacking adequate permanent income data on Italy, researchers
  - have looked at IG associations in education (Ballarino and Schizzerotto, 2011)
  - have resorted to indirect estimation methods (pseudo-panels) to uncover IG income mobility (Checchi, Ichino, Rustichini, 1999; Mocetti, 2007; Piraino, 2008)
- The emerging results picture a rather immobile country

Table 2 Countries ranked by average parent–child schooling correlation from Hertz et al. (2007) individuals Aged 20-69.

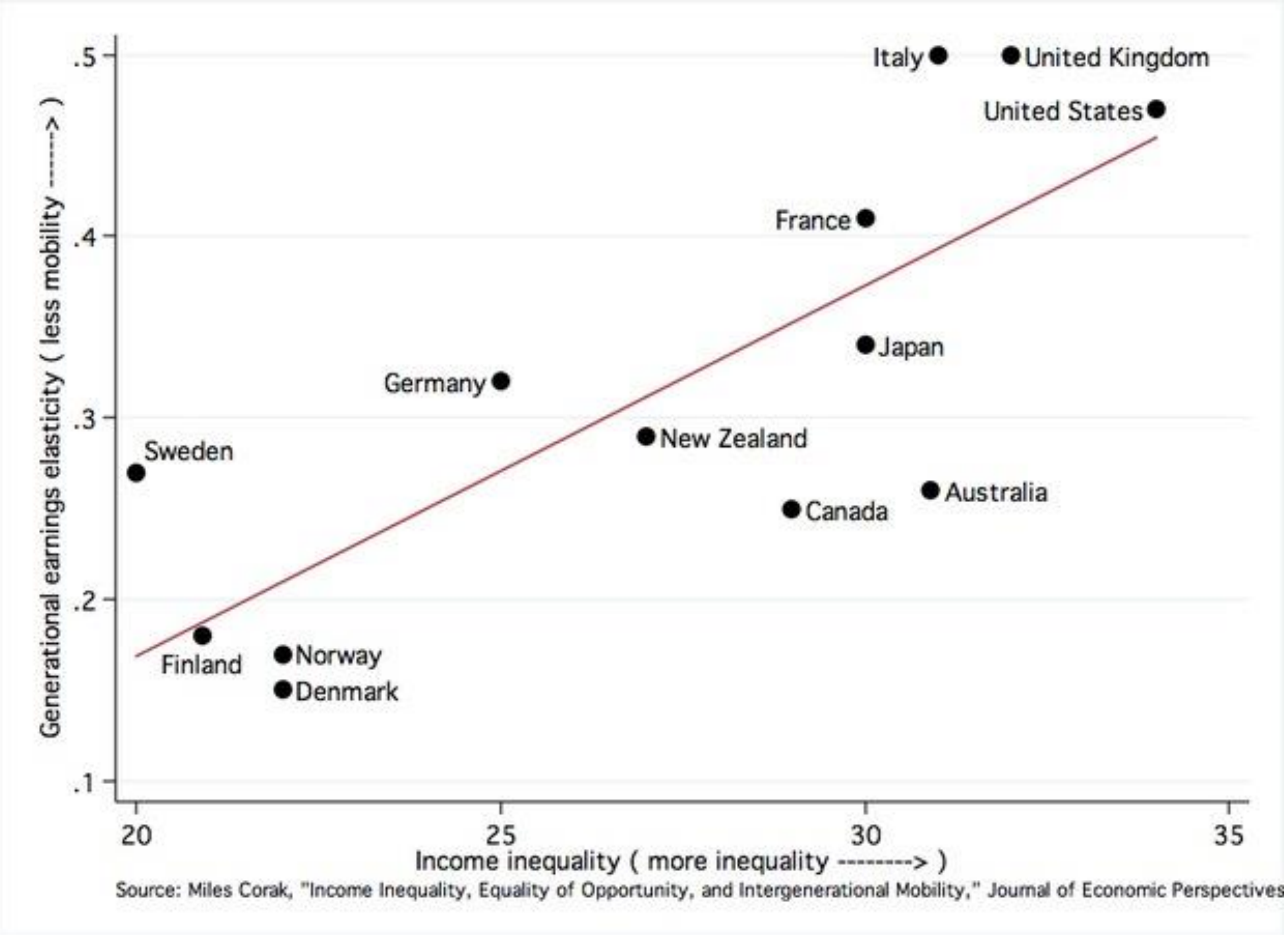
Country	Coefficient	Rank	Correlation	Rank
Peru	0.88	6	0.66	1
Ecuador	0.72	12	0.61	2
Panama	0.73	11	0.61	3
Chile	0.64	18	0.60	4
Brazil	0.95	4	0.59	5
Colombia	0.80	8	0.59	6
Nicaragua	0.82	7	0.55	7
Indonesia	0.78	9	0.55	8
Italy[a]	0.67	17	0.54	9
Slovenia[a]	0.54	27	0.52	10
Egypt	1.03	2	0.50	11
Hungary[a]	0.61	20	0.49	12
Sri Lanka	0.61	19	0.48	13
Pakistan	1.00	3	0.46	14
USA	0.46	33	0.46	15
The Netherlands	0.58	24	0.36	31
Norway	0.40	38	0.35	32
Nepal	0.94	5	0.35	33
New Zealand[a]	0.40	37	0.33	34
Finland	0.48	32	0.33	35
Northern Ireland	0.59	22	0.32	36
Great Britain[a]	0.71	14	0.31	37
Malaysia	0.38	39	0.31	38
Denmark	0.49	29	0.30	39

An immobile country: education

Source: Black and Devereux 2011

An immobile country: income

The Great Gatsby Curve (GGC)



Source: Corak 2012

An immobile country: income

Table 5
Scalar indicators of mobility for interclass transition matrices[a]

	Italy	US	Eq. opp.
$ML = 1 - \|\lambda_2\|$	0.55	0.65	1
$MT = \dfrac{k - \mathrm{tr}(P)}{k-1}$	0.74	0.85	1
$MD = 1 - \|\det(P)\|^{(1/(k-1))}$	0.79	0.90	1
$MB = \Sigma_i \Sigma_j f_{ij}\|i-j\|$	0.62	0.80	–
$MA = \Sigma_i \Sigma_j f_{ij}\|W_i - W_j\|$	22.44	27.55	–

[a] $|\lambda_2|$ is the modulus of the second greater eigenvalue; $\mathrm{tr}(P)$ and $\det(P)$ are, respectively, the trace and the determination of the interclass transition matrix P; k is the number of classes; f_{ij} is the joint frequency in cell (i, j); the distance $|i-j|$ is the number of class borders crossed in the transition from i to j. $|W_i - W_j|$ is the percentage difference between median incomes of class i and j.

Source: Checchi, Ichino and Rustichini 1999

This paper: Findings

- Italy is much more mobile than we thought
- The IGE(-lasticity) is 0.22, which compares with 0.5 on the GGC (same level as the US)
- Show that the IGE is not a sufficient statistic because of convexity of log-log associations.
- Even at the top of parental income distribution, the estimated IGE is much lower than previously thought (0.3)

Findings

- The preferred measure is the rank-rank slope (RRS) because percentile scatter plots are linear so that linear regression coefficient of ranks provides a sufficient statistic
- RSS = 0.23, much lower than the US one (0.34 reported in Chetty et al 2014)
- Significant local variation: higher mobility in the more developed areas
- Significant correlations between IG mobility and «good» economic outcomes

Implications of results

- The difference with previous studies is considerable: from the Status Society to the Land of Opportunity
- Taken together with educational correlations, the evidence suggests that education does not matter much for income
- For example, in the WB report graph (IG(income), IG(education)), Italy should move from the 45* line to NW region
- NW: Low educational mobility and high income mobility
- Low educated parents are rightly ‘chosing’ not to invest in children education

Why different from existing results?

- How can differences from the literature be explained?
- I discuss few possibilities
  1. Issues with indirect methods
  2. Permanent vs current incomes
  3. Life cycle bias
  4. Co-residence bias

(1) Issues of the indirect method

- Indirect methods proxy fathers' permanent income using the incomes of pseudo-fathers in occupation-education-yob cells

- They may underestimate dispersion in the fathers' generation (because of cell-wise imputations) and inflate the IGE.

- Applying the RRS (which is variance insensitive) to the pseudo-panel derived from SHIW we obtain an estimate of 0.31, still 50% larger than the one from tax records (and aligned with US estimates)

(2) Permanent Income

- Too short income strings (2 years for fathers and son)
- Perhaps not enough to proxy permanent income
- An issue especially for fathers (measurement error on the RHS)
- Solon (1992) showed that increasing the data points on fathers from 2 to 5 was enough to raise the US IGE from 0.2 to 0.5
- Mazumder (2005) reports IGE estimates of 0.6 with 15 years of father's incomes
- Also Chetty et al (2014) have 5 years on fathers (and 2 on sons)
- Mazumder (2016) shows that even with 5 yrs Chetty et al (2014) are underestimating the RRS

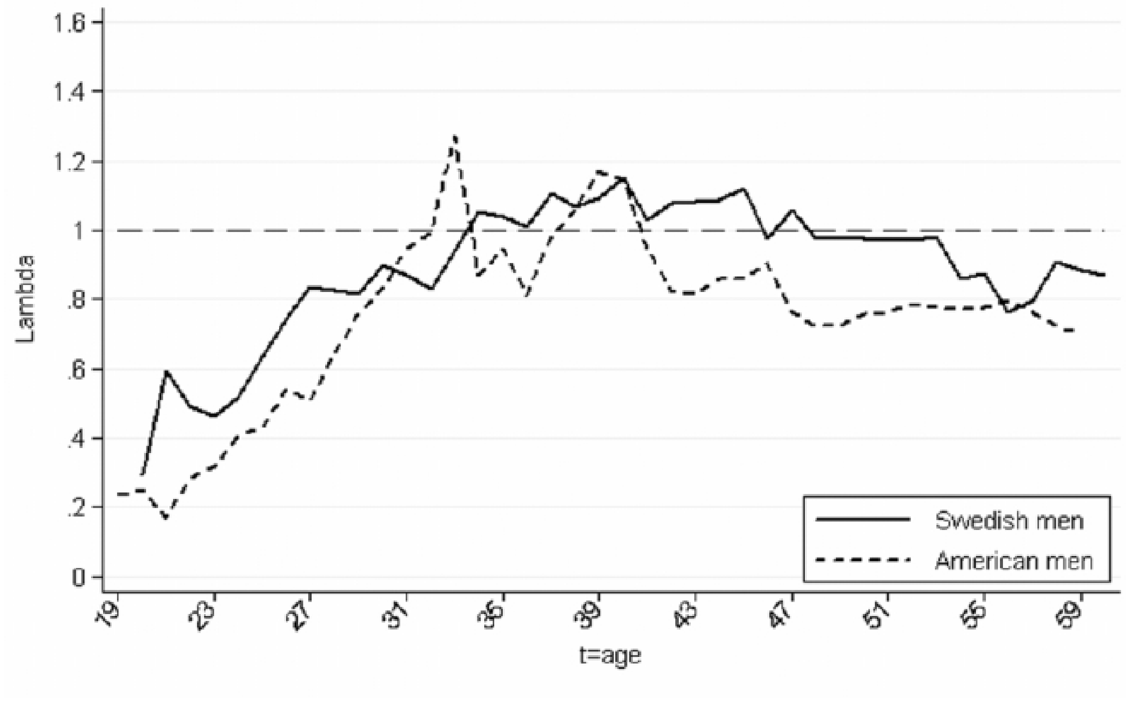
Too short income strings?

- This paper offers a simulation exrecise for comparing estimates obtained from short vs long strings, finding no big difference.
- The simulation assumes
  1. permanent incomes time invariant
  2. IG correlation equal to the estimated RSS
  3. stationarity of the income distribution between generations and time periods (var=1)

- If the simulation is fed with RRS=0.23 and permanent income are fixed, then it is not suprising that we get back an estimate of the RRS of about that size from both short and long strings
- Stationarity assumption does not seem to hold in other admin sources (INPS): SD logs in the sons cohort in 2012 some 35% larger than one in the fathers' cohort in 1998 (1.17 vs 0.86)

(3) Life-cycle bias

- Incomes too early or too late in life are poor proxies of permanent incomes (Haider and Solon, 2006)
- Life-cycle disalignement between parent and child therefore exacerbate measurement error (Nybom and Stuhler, 2016)
- In the absence of complete histories, the golden standard is considered to be average annual income in the 30-40 range.

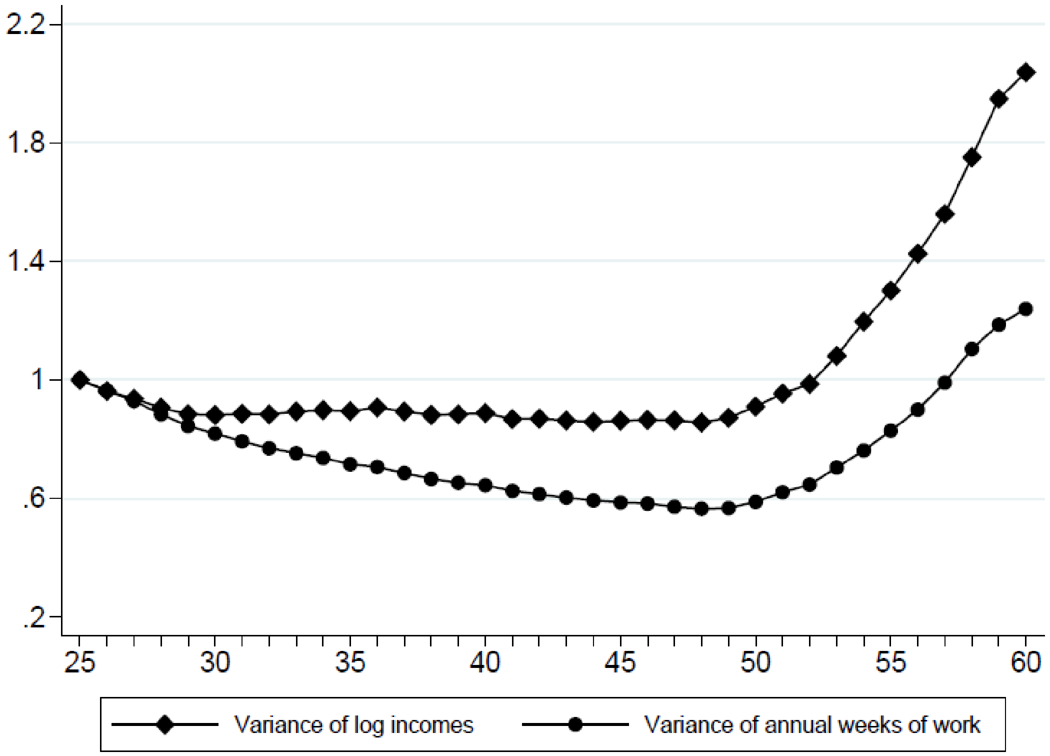


Source Bohlmark and Liudnqvist 2006

Life-cycle bias

- Parents born 1942-63 and their incomes in 1998-99 (ages 35-55)
- Children born 1972-83 and their incomes in 2011-12 (ages 29-40; 15-27 when matched)
- Indeed this paper shows that in Italy estimates are sensitive even to children in the 30-35 range, and exclude them
- What about fathers? Income volatility increases after 45-50 (increased heterogeneity of labor supply)
- Volatile fathers may downward bias RSS estimates
- But these fathers are likely the ones allowing 35-40 children to contribute to estimation: tension between old enough children and not too old fathers

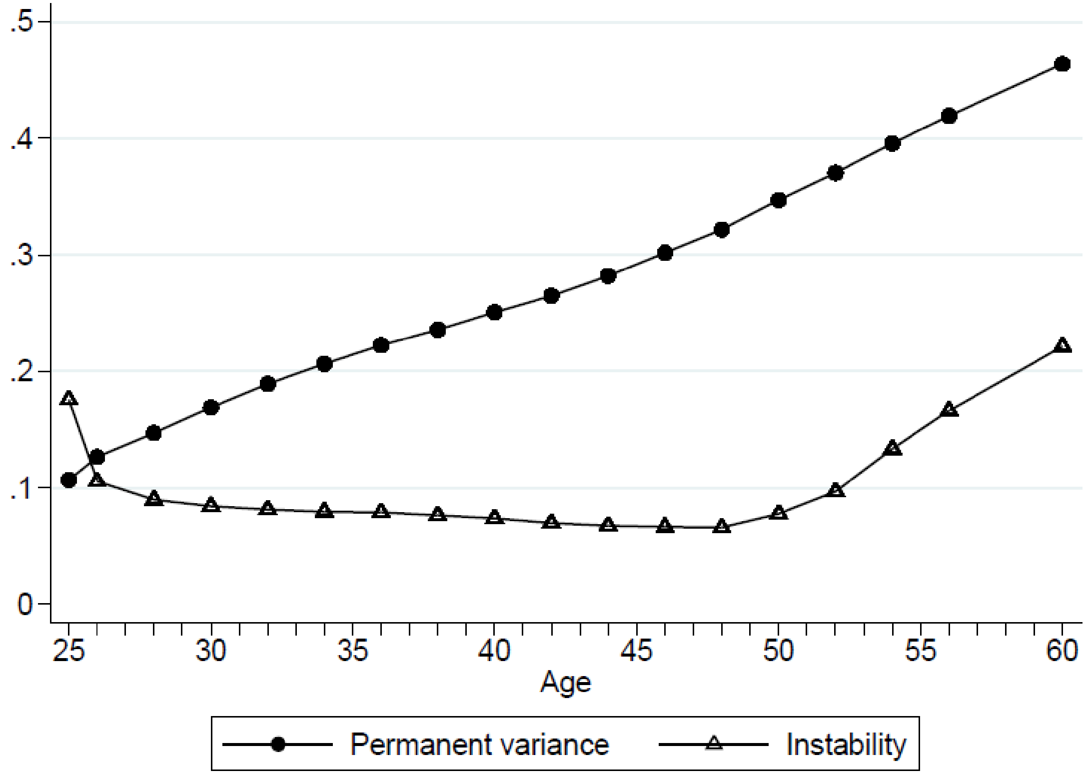
Figure 2: The variance of log labor incomes and the variance of annual weeks of work over the life-cycle



Both lines are normalized to 1 at age 25.

Source Aktas 2017, INPS data

Figure 4: **Variance-decomposition over the life-cycle**



Source Aktas 2017, INPS data

(4) Co-residence bias

- Parent-child couples are sampled conditional on co-residing in 1998, for children aged 21-26 in that year
- Are these children a random sample from the population of children?
- Of course, in Italy there is high co-residence at that age. About 90% in those cohorts according to SHIW data.
- Is this enough to rule out selectvity?
- Perhaps not: SHIW data also show that for those cohorts co-residing significantly depends on being a (college) student
- ..and that co-residence drops to 80% in households with low education parents
- College students from low income households are the engine of upward mobility, which may induce an edogenous sample selection towards finding higher mobility

Co-residence bias

- Chetty et al (2014) have exactly the same limitation as yours coming from digitalization of tax declarations only since 1997, but they sample children only from cohort 1982 and onwards, precisely to avoid selectivity into co-residing

- This exposes them to life-cycle bias (these kids are too young in 2012 when they observe their incomes) as Mazumder (2016) suggests

- Ideally one wants to sample children when they are still in compulsory education, and then follow them throughout the income life cycle (or at least up to 40)

- In the Italian case, in 1998 compulsory education ended normally at 13, such as cohorts 1985 and younger should be sampled.
- Cohort 1985 will be 40 in 2025

Wrapping up

- A great paper that brings Italian IG income mobility at the centre of the stage
- It opens the discussion on the need of direct estimates of IG associations in Italy
- Policy-sensitive parameters, essential to have robust estimates
- Important to understand why the estimates differ from existing studies
- Does IT move so much?

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